Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

(FOR BROADCAST USE ONLY)

HOMEMAKERS' CHAT TUESDAY, FEBRUARY 25, 1941

Subject: "QUESTIONS AND ANSWERS." Information from the Bureau of Agricultural Chemistry and Engineering, U. S. D. A.

--ooOoo--

The mailbag is filled to the brim and overflowing with questions today. One letter inquires about a "metal taste" in canned fruit juice. Another asks if rhubarb or "pie-plant" contains a poisonous acid. Then, a housewife has written to know how to keep mold from growing on maple sirup. Last of all, is a letter asking how to make pectin from orange peel. Let's take these questions up, one by one, with the answers from chemists of the U. S. Department of Agriculture.

Let's begin with that letter about a metal taste in fruit juice. The letter says: "Please tell me what might cause canned grapefruit juice to have a taste of metal. Would that taste mean the juice might be harmful?"

Chemists working on fruit juice problems reply that when the acid in the juice comes in contact with the iron in the can, the juice takes on a metal taste. The metal taste is perfectly harmless but not appetizing. You know, of course, that "tin cans" are not entirely made of tin. They are iron cans coated with tin. Some have special enamel linings to protect the food from the iron. But if acid food stands long enough, even in an enameled can, the acid may eventually work through to the iron. When you buy canned fruit juice with a metal taste, you can make a good guess that it has been in stock for some time -- perhaps 2 years.

You can also make a good guess that the juice has lost much of its vitamin C. Freshly canned juice is practically as rich in vitamin C as the fresh juice. But the vitamin gradually disappears as the can of juice stands on the grocery shelf.

This metal taste is not the same thing as the "flat" taste you often notice in canned juices. A flat taste indicates that the juice has been protected from loss of vitamin C by having the air driven out. Lack of air causes that flatness of flavor. To save vitamin C in canned juice, canners now drive all the air out and process the juice in a vacuum. You can easily bring back the air and the fresh taste, by pouring the juice back and forth from one drinking-glass to another. Do this just before you drink the juice. Don't restore the air and then let the juice wait for hours, for then the air will act on the vitamin C, and you'll lose much of t the value of the juice.

So much for the question of "metal" taste and "flat" taste in fruit juice. Now to answer the housewife who asks: "Is it true that rhubarb contains a poisonous acid?"

Yes, the rhubarb plant contains oxalic acid which is harmful if you get enough of it. But this acid is mostly in the leaves of the rhubarb. You eat only the stems, and they contain only a slight amount of the acid-- too little to worry about. People have been enjoying rhubarb sauce and rhubarb pie in spring for hundreds of years.

From rhubarb let's go on to the question about maple sirup. A housewife writes: "I buy maple sirup in gallon tins, and I keep it in the refrigerator. But before my family has time to use it up, mold always starts growing on the top of the sirup. Can you tell me how to prevent this mold?"

The chemists advise heating the sirup after you have opened the can, and putting the hot sirup in smaller containers. Skim off any traces of mold, and bring the sirup to boiling in a large open kettle. Pour the sirup hot into clean preheated glass bottles or jars. Seal airtight. Small jars or bottles are especially convenient for table use.

Be sure to use a large kettle for heating the sirup. Maple sirup foams when it reaches boiling and may bubble up to twice its bulk. Unless you have a large

enough kettle, it may boil over. Of course, you know mold is not harmful as a rule. You want to prevent it because it looks unpleasant and is likely to give sirup a musty or moldy taste.

Now for the last question. This one is about making pectin for jelly from citrus fruit. A housewife writes: "I have heard of some way to make pectin at home by cooking orange or lemon peel. Will you tell me how to do it?"

You can make pectin extract from the white part of orange, lemon, or grapefruit peel. The pectin in the fruit dissolves in hot water containing acid. So you first soak the white "underpeel" in water containing tartaric acid, and then boil them together. Finally, you strain off the liquid. The strained liquid is the pectin extract you use in making jelly. From the same batch of peel, you can draw out the pectin 3 times by boiling with more water and tartaric acid each time. (By the way, you get tartaric acid powder at the drug store.)

Briefly, here are the directions for homemade pectin extract from the Department-of-Agriculture bulletin, "Homemade Jellies, Jams and Preserves." Wash oranges and lemons which have thick skins. Cut off the thin outside yellow rind with a stainless-steel knife. Now remove the white peel from the fruit; run it through the meat grinder; and weigh it. A pound of white peel calls for 2 quarts of water and 1 tablespoon of tartaric acid. Stir the acid in the water until it dissolves. Now put the acid-water and white peel together in a large, flat-bottomed pan. Let them stand together for an hour or two. Then put them on the stove to boil until the mixture is half as deep as when you started. Strain through 4 thicknesses of cheesecloth. The liquid that strains through is pectin extract.

You can draw out pectin 2 more times from the same peel by cooking down twice again, each time with 2 quarts of water and 1 tablespoon of acid.

The 3 extractions of pectin, poured together, will make about 2 and a half pints of liquid pectin. You can use this pectin for making jelly now, or you can put it in jars, and process it in boiling water to keep for jelly-making next summer.

That's all the questions on schedule for today. Listen for more on Thursday.

###